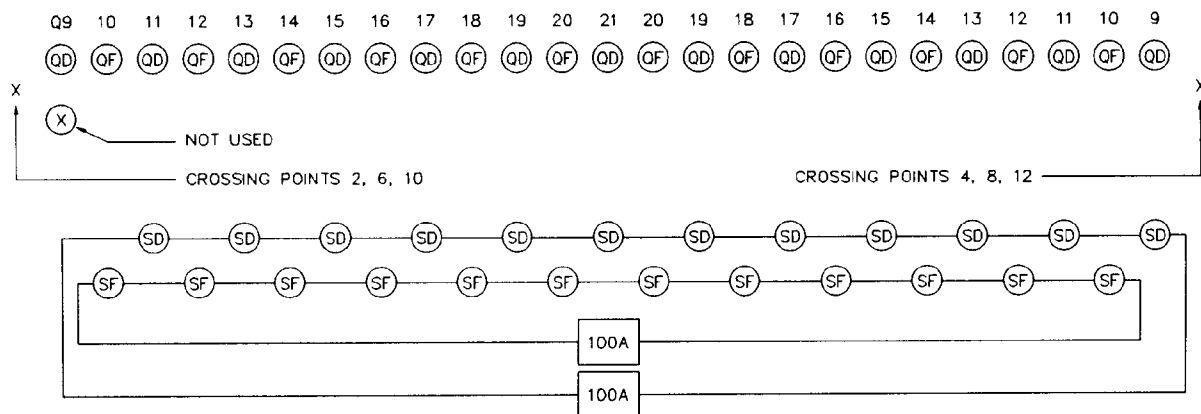


### vi. Correction Magnet Power Supply Systems

There are corrector magnets in each CQ, CQS, or CQT assembly. The leads for these magnets are brought out individually at each CQ- cryostat. If a corrector magnet should fail, this would make isolating the defective magnet possible.

Figure 2-12 shows the circuit scheme for powering the chromaticity sextupoles,  $b_2$ . The circuits are symmetrical about the labeled crossing points. These elements are connected in two families, focussing and defocussing, in each arc. Each family is powered individually.



**Fig. 2-12.** Sextupole circuit.

Figures 2-13 and 2-14 show the configuration of the corrector power supplies for the blue ring. The yellow ring correctors are a mirror image, about the 6:00 insertion region, of the blue correctors. The figures show the correctors in the range, Q10-Q1-Q1-Q18. All the corrector packages in this region are four layers. Outside this range, Q19-Q21-Q10, all corrector packages are single layer (dipole only).

The  $a_0/b_0$  closed orbit correction magnets are individually powered in both the arcs and the insertion regions. All are nominally 25 A bipolar supplies, but extra regulators will be available at each alcove to upgrade the current capability to 50 A for up to 25% of the regulators.

The dipole and  $a_1$  correctors in the triplet region are individually powered at every insertion region, in the same manner as the other  $a_0/b_0$  elements. In addition, at those regions requiring the lowest  $\beta^*$ , the  $b_2$ ,  $b_3$ ,  $b_4$ , and  $b_5$  elements are also individually powered. This is indicated in Figs. 2-13 and 2-14 by drawing those elements within a dotted circle. In its initial configuration, low  $\beta^*$  will be required at the 6:00 and 8:00 regions, but as the leads to all the correctors are available, the other insertion regions can easily be upgraded.

The other corrector supplies are connected as shown. Where circles are shaded, the magnets are not powered, but the leads are available for future use.

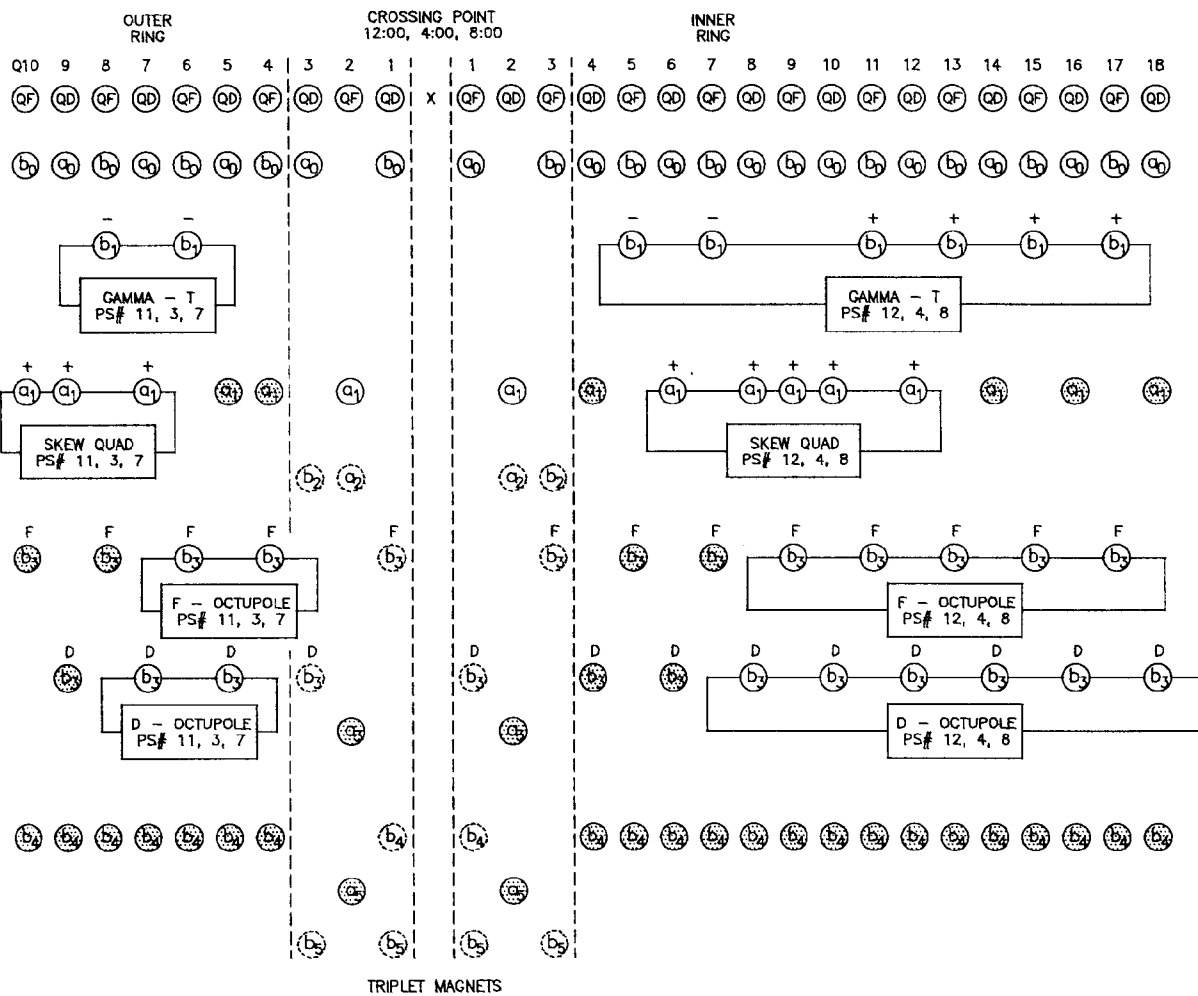


Fig. 2-13. Corrector power supplies at 12, 4 and 8 o'clock.

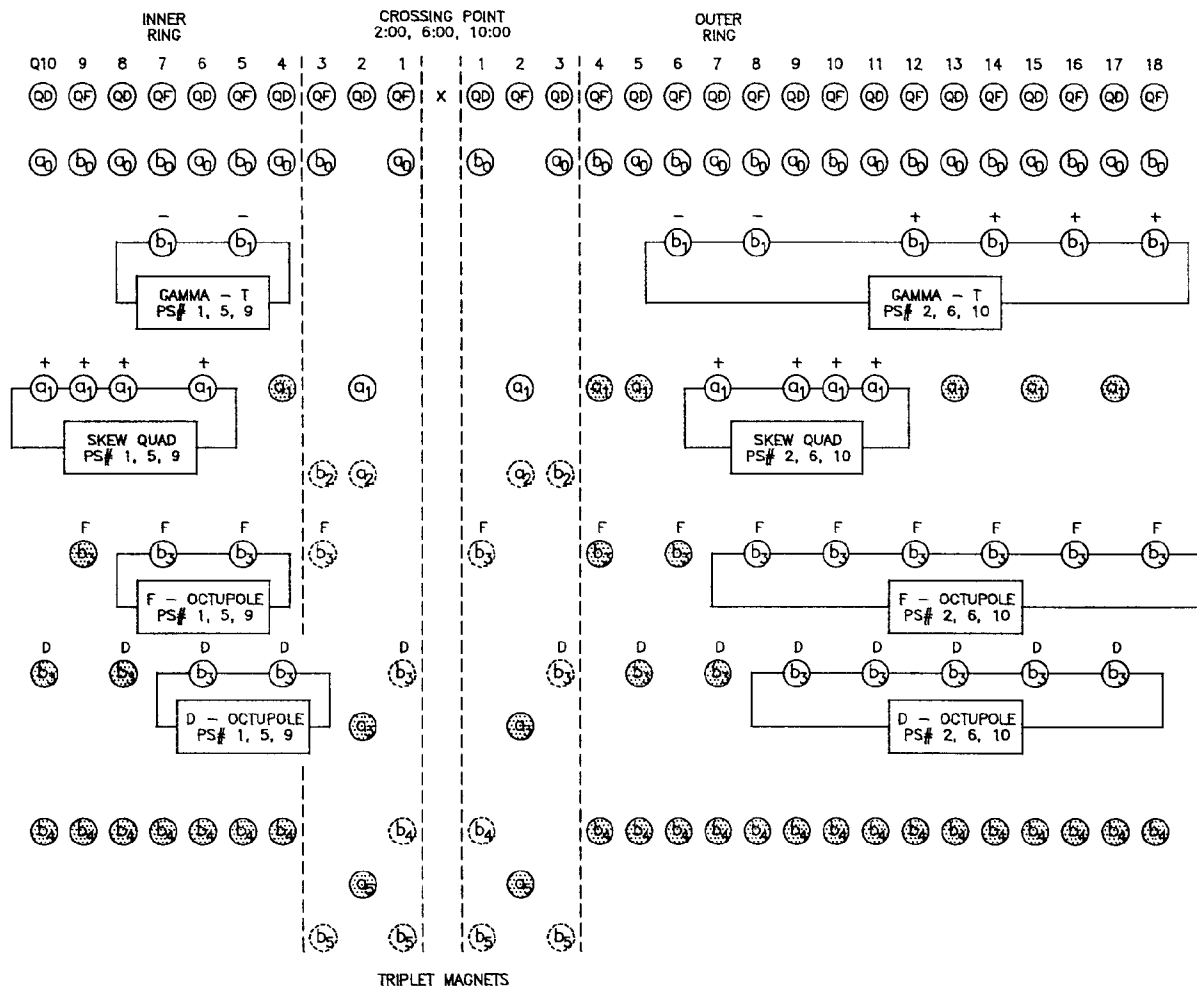


Fig. 2-14. Corrector supplies at 2, 6 and 10 o'clock.